

## Eawag

Eawag is a research institute within the ETH domain and one of the world's leading research institutions in the field of water and aquatic ecosystems. It focuses on concepts and technologies for the sustainable use of water resources, while striving to reconcile the ecological, economic and social aspects of the water bodies. Eawag also undertakes teaching and consultancy work, and thereby acts as an important link between research and practical application. About 500 staff are employed by Eawag in Dübendorf and Kastanienbaum.

[eawag.ch](http://eawag.ch)

## PEAK

Eawag offers a continuing education programme to practising professionals, which goes by the name of PEAK (practice oriented Eawag courses). The courses are based on current research work and experiences. Several courses are run every year, which, alongside PEAK's purpose of knowledge transfer, serve as a forum for dialogue between the participants, and between research and practice.

[peak.eawag.ch](http://peak.eawag.ch)

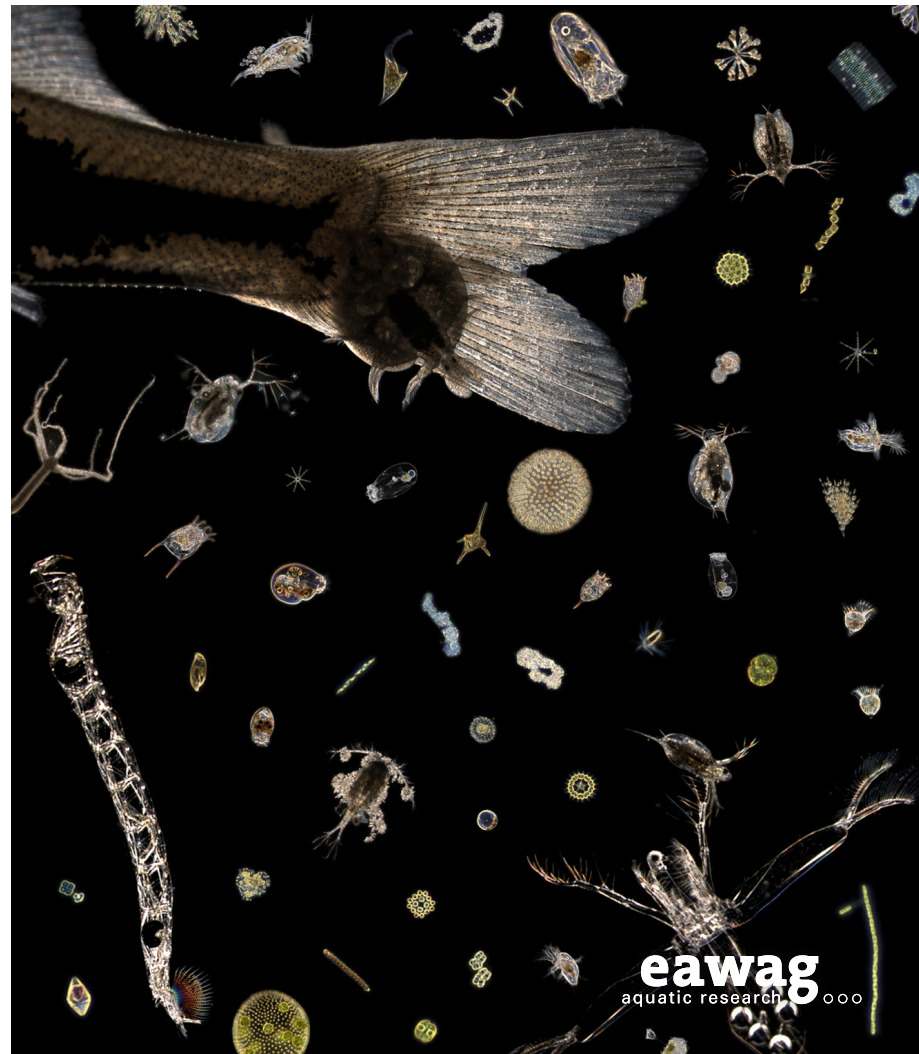
## Eawag

Swiss Federal Institute of  
Aquatic Science and Technology

# New tools for automated monitoring of plankton diversity and algal blooms

PEAK Advanced Course V53/22

7 April 2022, Dübendorf



*Underwater life, pictures from [www.aquascope.ch](http://www.aquascope.ch). Collage by Thea Bulas.*

# New tools for automated monitoring of plankton diversity and algal blooms

PEAK Advanced Course V53/22

## Objectives

Plankton diversity monitoring is currently based on sampling and microscopy, which require expensive infrastructure, high processing time, and specialised personnel (taxonomists). These limitations have stimulated the development of alternative and automated monitoring tools, among which imaging techniques have shown the highest potential to yield standardised and reproducible real-time data. We review the state of the art in terms of automated plankton monitoring, present comparisons with traditional methods, test plankton imaging in the laboratory and visit the Eawag monitoring installation in Greifensee (**[www.aquascope.ch](http://www.aquascope.ch)**).

## For whom

The course targets professionals from the private (e.g., consulting, water management) and public (e.g., cantonal authorities) sectors, engaged in monitoring plankton in water bodies and interested in automating plankton identification and counting, or early warning tools for algal blooms.

## Subjects

- Review of current approaches for automated monitoring and early warning
- Advantages and limitations of automated lab and in-situ monitoring tools
- Comparison of underwater imaging and traditional methods for plankton monitoring
- Laboratory test of underwater imaging
- Field excursion (Greifensee) and inspection of in-situ installation

## Lecturers

Dr. Francesco Pomati, Eawag

Marta Reyes, Eawag

Silvana Käser, Eawag

## Course lead

Dr. Francesco Pomati, Eawag

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## Course Secretariat

Eawag, PEAK

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## Registration

Online: **[peak.eawag.ch](http://peak.eawag.ch)**, deadline: **20 March 2022**

The number of participants is limited to 16 persons.

## Documentation

The presentations will be made available electronically for download before the course. The participants will receive a course certificate.

## Language

English and German

## Course Fee

CHF 350.–

*(CHF 250.– for students, a copy of a student card is required) including course documentation and material, excursion transfers, lunch and refreshments.*

Other meals and hotel accommodation are not included.

## General Terms and Conditions

Eawag's general terms and conditions apply:

**[eawag.ch/gtc](http://eawag.ch/gtc)**

## Date, Time

Thursday, 7 April 2022 from 9 am to 5 pm

## Location

Eawag, Überlandstrasse 133, 8600 Dübendorf